AMENDMENTS TO THE SPECIFICATION:

Please amend paragraph [0020], on page 9, as follows:

The silicon material comprises a wafer thickness which, as manufactured, is between about 725 and about 750 µm notmm thick. Thin film separation layer 1 [[2]] can be deposited by a number of methods known to those skilled in the art, such as chemical vapor deposition (CVD), plasma-enhanced CVD, or spin-on. In an exemplary embodiment, the separation layer comprises a silicon oxide formed by a plasma-enhanced CVD process with a tetraethoxysilane (TEOS) source in a process known in the art. Next, a photoresist layer is cured, using layer and oxide deposited upon the techniques. The photoresist processing conventional photoresist layer is then patterned, preferably with an optical aligner and a photomask, exposed and developed to create openings in the photoresist layer. Then, using the resist layer as a masking layer, the pattern is transferred into the underlying oxide by a dry etching method using a LAM4520XL etch chamber and $C_4F_8CO/Ar/O_2$ chemistry. Then, the resist is stripped from the oxide layer using conventional photoresist processing techniques, such as a solvent strip or an O2 dry etch (ashing) method. Notably, the present invention is not limited to vias or through-holes but includes other shaped structures apparent to those skilled in the art such as lines, squares, and octagons.

Please amend paragraph [0021], on page 10, as follows:

The backside of the wafer to be fabricated into a silicon support membrane is lithographically patterned using a similar method. A deep reactive ion etch is used to transfer the features laterally-defined by the masking layer into the bulk substrate. A suitable deep etch method is described in co-pending pending patent application serial number 10/639,989, now United States Patent No. 7,060,624 for patent, Docket YOR920030048US1 (misidentified in the application as YOR20030488US1), which is commonly assigned with the present invention and is incorporated herein by reference.

Please amend paragraph [0025], on page 12, as follows:

The structure in FIG. 3 uses for the separation layer 4 a thin layer, about 1 micron, of molecular-cage compounds known as zeolites to separate small molecules based on size. The thin film can be deposited by spin-on. Small molecules are trapped within the molecular-cage structure, permitting larger molecules to pass. If necessary, pretreatment of the surface underlying the zeolite layer can be used to improve adhesion.